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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

BROOKS, JERRY L.

ART UNIT

PAPER NUMBER

4126

NOTIFICATION DATE

DELIVERY MODE

04/16/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/596,404	Applicant(s) DANIEL ET AL.	
	Examiner JERRY BROOKS	Art Unit 4126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 7, 11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>06/12/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 5442415) in view of Reinhard (US 4, 257, 694) and further in view of Badalich (US 4,030,821).

3. With respect to claim 1, Chao et al. (US 5442415) herein after referred to as "Chao," discloses a lamp and projection device comprising: a lamp body consisting of six faces (fig.3); one of said faces (17) being a hinged top face lid with interior mirrored surface (7) capable of reflecting and projecting an image at various angles from vertical to horizontal (also see figures 1 and 2); support structure for supporting an imaging device (see figure 2,19 and see figure 1) and parts of an illumination and projection system (see figure 2); and an illumination and projection system (see figure 2) consisting of at least one lamp or light- emitting unit (1), a plurality of reflecting mirrors (see 12 and 15), and condensing lens (fig. 2,16).

4. However, Chao does not explicitly disclose six substantially identical faces assembled to form a cube, at least one moveable condensing lens and an electrical transformer and switch.

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5. Reinhard (US 4, 257, 694) herein after referred to as "Reinhard," discloses a lamp and projection device (fig.3) comprising: a lamp body (fig. 3) consisting of a support structure for supporting parts of an illumination (fig.3, 24) and projection system (fig. 3); and an illumination and projection system consisting of at least one lamp (fig.2, 12) or light- emitting unit, a plurality of reflecting mirrors (fig.3; 7, 8) at least one condensing lens (fig.2, 11) and six substantially identical faces assembled to form a cube (column 1, paragraph 1). It would have been obvious to one of ordinary skill in the art at the time of invention to use Reinhard's disclosure in Chao's device to make it more compact and reduce manufacturing cost.

6. Badalich (US 4,030,821) herein after referred to as "Badalich," discloses a lamp (fig.3, 28) and projection device (figure 3) comprising: a lamp body (see unnumbered structure containing (28)), a support structure (70, 61, 62 and see unnumbered structure containing (28)) for supporting an parts of an illumination and projection system; and an illumination and projection system (see fig. 3) consisting of at least one lamp (28) or light- emitting unit, a plurality of reflecting mirrors (68, 64) at least one movable condensing lens (36) and an electrical transformer and switch (column 3, paragraph 4). It would have been obvious to one of ordinary skill in the art at the time of invention to apply Banality's transformer, switch and movable condensing lens to Chao's device in view of Reinhard to utilize voltage efficiently (see column 3, paragraph 4) and improve the quality of the projected image.

7. Therefore it would have been motivated to combine the teachings of Banality's disclosure to Chao's device in view of Reinhard.

8. With respect claim 3, Chao in view of Reinhard and further in view of Badalich disclose the lamp and projection device according to claim 1 as discussed above. Chao further discloses wherein said imaging device is a removable single slide (fig. 2, 3).

9. With respect claim 6, Chao in view of Reinhard and further in view of Badalich disclose the lamp and projection device according to claim 1 as discussed above, Chao in view of Reinhard does not disclose wherein said faces contain an internal support structure of struts and grooves for fixing the parts of the illumination system where such grooves support various parts or are not used depending on their rotation and position as a cube face.

10. Badalich discloses wherein said faces contain an molded support (Badalich: see fig. 3, supporting 70) and grooves (Badalich: see fig.6, supporting 80) for fixing the parts of the illumination system where such grooves support various parts or are not used depending on their rotation and position as a cube face. It would have been obvious to one of ordinary skill in the art at the time of invention to use Banality's struts and grooves to strengthen the structure of Chao's projector in view of Badalich. Therefore it would have been motivated to combine the teachings of Banality's disclosure to Chao's device in view of Reinhard.

11. With respect claim 8, Chao in view of Reinhard and further in view of Badalich disclose the lamp and projection device according to claim 1 as discussed above, Chao

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does not disclose a micro-switch used to turn the device on or off as the top hinged lid is opened.

12. Badalich discloses a projector housing door with a micro-switch (144) actuation arrangement which controls the power of the projector (Drawing Description: fig. 8). It would have been obvious to one of ordinary skill in the art at the time of invention to use Banality's micro switch in Chao's projector in view of Reinhard to turn the device on or off as the top hinged lid is opened so that voltage can be utilized efficiently. Therefore it would have been motivated to combine the teachings of Banality's disclosure to Chao's device in view of Reinhard.

13. With respect to claim 10, Chao in view of Reinhard and further in view of Badalich disclose the lamp and projection device according to claim 1 as discussed above, Chao in view of Reinhard does not disclose said cube faces contain recessed grooves suitable for being punched through during manufacture or during installation to create holes or grooves suitable for alternative wire exit or for affixing the lamp to a surface or wall.

14. Badalich discloses wherein said cube faces contain recessed grooves suitable for being punched through during manufacture or during installation to create holes or grooves suitable for alternative wire exit or for affixing the lamp to a surface or wall (Badalich: see fig.6, supporting 80). It would have been obvious to one of ordinary skill in the art at the time of invention to use Banality's grooves to reduce manufacturing .cost. Therefore it would have been motivated to combine the teachings of Banality's disclosure to Chao's device in view of Reinhard.

15. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 5442415) in view of Reinhard (US 4, 257, 694) and further in view of Badalich (US 4,030,821) and Gishi et al. (US 6,837,583).

16. With respect to claim 2, Chao et al. (US 5442415) herein after referred to as "Chao," in view of Reinhard (US 4, 257, 694) herein after referred to as "Reinhard," and further in view of Badalich (US 4,030,821) herein after referred to as "Badalich" the lamp and projection device according to claim 1 as discussed above, does not explicitly disclose wherein said six substantially identical faces are modular interlocking faces. Gishi et al. (US 6,837,583) herein after referred to as "Gishi" discloses a projector and lamp body (see figure 3) having modular interlocking faces (see figure 3;12, 11). It would have been obvious to one of ordinary skill in the art at the time of invention to combine Gishi's teaching of modular interlocking surfaces to Chao's device in view of Reinhard and further in view of Badalich so that said six substantially identical faces are modular interlocking faces to reduce material cost. Therefore it would have been motivated to apply Gishi's disclosure to Chao's device in view of Reinhard and further in view of Badalich.

17. With respect to claim 5, Chao in view of Reinhard and further in view of Badalich disclose the lamp and projection device according to claim 1 as discussed above, wherein said faces are identical, but does not disclose wherein said faces contain recesses and protrusions at opposed edges such that they can be assembled by rotating appropriately and interlocked with similar parts in a cube arrangement. Gishi

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discloses a projector and lamp body (see figure 3) faces contain recesses and protrusions at opposed edges (see figure 3;12, 11). It would have been obvious at the time of invention to one of ordinary skill in the art to combine Gishi's teaching of faces containing recesses and protrusions at opposed edges to Chao's device in view of Reinhard and further in view of Badalich such that they can be assembled by rotating appropriately and interlocked with similar parts in a cube arrangement to reduce manufacturing cost. Therefore it would have been motivated to apply Gishi's disclosure to Chao's device in view of Reinhard and further in view of Badalich.

18. Claim 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 5442415) a in view of Reinhard (US 4, 257, 694) and further in view of Badalich (US 4,030,821) and Helot et al. (US 5,823,651).

19. With respect to claim 4, Chao et al. (US 5442415) herein after referred to as "Chao," in view of Reinhard (US 4, 257, 694) herein after referred to as "Reinhard," and further in view of Badalich (US 4,030,821) herein after referred to as "Badalich" the lamp and projection device according to claim 1 as discussed above, does not explicitly disclose wherein said imaging device is a digital means, such as a transparent LCD panel, LCOS panel, Digital micro-mirror or other digital imaging light engine.

20. Helot et al. (US 5,823,651) herein after referred to as "Helot," teaches that using a transparent LCD panel in a slide projector. Helot also discloses that by using a transparent LCD panel "a presenter can create a more dynamic presentation using

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video, graphic animation, enhanced colors, programmable slide timing, and sound synchronization (column 1, lines 35-40).” At the time of invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Helot to Chao’s device in view of Reinhard and further in view of Badalich to create a more dynamic presentation (column 1, lines 35-40). Therefore it would have been motivated to apply Helot’s disclosure to Chao’s device in view of Reinhard and further in view of Badalich.

21. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 5442415) a in view of Reinhard (US 4, 257, 694) and further in view of Badalich (US 4,030,821) and Burgess (4,184,755).

22. With respect to claim 9, Chao et al. (US 5442415) herein after referred to as “Chao,” in view of Reinhard (US 4, 257, 694) herein after referred to as “Reinhard,” and further in view of Badalich (US 4,030,821) herein after referred to as “Badalich” the lamp and projection device according to claim 1 as discussed above, does not explicitly disclose wherein a folded and punched metal sheet supports the bulb unit and provides heat dispersion and venting. Burgess (4,184,755) herein after referred to as “Burgess,” discloses wherein a folded and punched metal sheet (fig. 6) supports the bulb unit and provides heat dispersion and venting. At the time of invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Burgess to Chao’s device in view of Reinhard and further in view of Badalich to reduce manufacturing cost

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.Therefore it would have been motivated to apply Burgess's disclosure to Morinaga's device in view of Reinhard and further in view of Badalich.

23. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 5442415) a in view of Reinhard (US 4, 257, 694) and further in view of Badalich (US 4,030,821) and Kojima (6, 561, 656).

24. With respect to claim 13, Chao et al. (US 5442415) herein after referred to as "Chao," in view of Reinhard (US 4, 257, 694) herein after referred to as "Reinhard," and further in view of Badalich (US 4,030,821) herein after referred to as "Badalich" the lamp and projection device according to claim 1 as discussed above, does not explicitly disclose further including a supporting digital device means comprising a digital micro mirror device and associated light filters, lenses, rotating color wheel and an electronic control system supported on said lamp body.

25. Kojima (6, 561, 656) herein after referred to as "Kojima," discloses a projector (figure 13) and a supporting digital device means (fig. 13, 5) comprising a digital micro mirror device (fig. 13, 5) and associated light filters (2), lenses (9,10,11,12), rotating color wheel (2) and an electronic control system (col.6, second paragraph). At the time of invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Kojima to Chao's device in view of Reinhard and further in view of Badalich on said lamp body to improve the quality of the image. Therefore it would have been motivated to apply Kojima's disclosure to Chao's device in view of Reinhard and further in view of Badalich.

26. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 5442415) a in view of Reinhard (US 4, 257, 694) and further in view of Badalich (US 4,030,821) and Olsen et al. (6, 830, 340).

27. Chao et al. (US 5442415) herein after referred to as "Chao," in view of Reinhard (US 4, 257, 694) herein after referred to as "Reinhard," and further in view of Badalich (US 4,030,821) herein after referred to as "Badalich" the lamp and projection device according to claim 1 as discussed above, does not explicitly disclose the device in combination with external connector sockets and connector slots to support removable digital data media for photograph or video content such that the overall device forms a digital photo projector cube. Olsen et al. (6, 830, 340) herein after referred to as "Olsen," teaches external connector sockets (fig. 1,17) and connector slots (fig. 1,22) to support removable digital data media (fig.1, 15) for photograph or video content (column 3, paragraph 4). At the time of invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Olsen to Chao's device in view of Reinhard and further in view of Badalich such that the overall device forms a digital photo projector cube in order to improve its the versatility. Therefore it would have been motivated to apply Olsen's disclosure to Chao's device in view of Reinhard and further in view of Badalich.

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28. With respect to claim 15, Chao in view of Reinhard and further in view of Badalich and Olsen discloses the lamp and projection device according to claim 1, Chao does not explicitly disclose wherein said overall device forming a digital projector cube suitable for video, gaming and computer display output. Olsen teaches external connector sockets (fig. 1,17) and connector slots (fig. 1,22) to support removable digital data media (fig.1, 15) for photograph or video content (column 3, paragraph 4). At the time of invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Olsen to Chao's device in view of Reinhard and further in view of Badalich such that said overall device forms a digital projector cube suitable for video (column 3, paragraph 4), gaming and computer display output (see fig. 4; 60, 62, 68) in order to improve its the versatility. Therefore it would have been motivated to apply Olsen's disclosure to Chao's device in view of Reinhard and further in view of Badalich.

29. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chao et al. (US 5442415) in view of Reinhard (US 4, 257, 694) and further in view of Badalich (US 4,030,821), Gishi et al. (US 6,837,583) and Burgess (4,184,755) .

30. With respect to claim 16, Chao (US 5442415) herein after referred to as "Chao," discloses a lamp and projection device comprising: a lamp body consisting of six faces (fig.3); one of said faces (17) being a hinged top face lid that contains a mirrored inside surface (7) and is capable of reflecting and projecting an image at various angles and

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an illumination and projection system (see figure 2) consisting of at least one lamp or light- emitting unit (1), a plurality of reflecting mirrors (see 12 and 15), single slide (fig. 2, 3), a bulb (1) and condensing lens (fig. 2,16).

31. However, Chao does not explicitly disclose six identical modular faces assembled by means of protrusions and recesses on opposed edges to form an overall cube, molded support structures and grooves, a folded sheet bulb holder ,at least one moveable lens holder and an electrical transformer and switch which activates when the lid is opened.

32. Reinhard (US 4, 257, 694) herein after referred to as "Reinhard," discloses a lamp and projection device (fig.3) comprising: a lamp body (fig. 3) consisting of a support structure for supporting parts of an illumination (fig.3, 24) and projection system (fig. 3); and an illumination and projection system consisting of at least one lamp (fig.2, 12) or light- emitting unit, a plurality of reflecting mirrors (fig.3; 7, 8) at least one condensing lens (fig.2, 11) and six substantially identical faces assembled to form a cube (column 1, paragraph 1). It would have been obvious to one of ordinary skill in the art at the time of invention to use Reinhard's disclosure in Chao's device to make it more compact and reduce manufacturing cost.

33. Badalich (US 4,030,821) herein after referred to as "Badalich," discloses a lamp (fig.3, 28) and projection device (figure 3) comprising: a lamp body (see unnumbered structure containing (28)), a support structures (70, 61, 62 and see unnumbered structure containing (28)) and grooves (see 80) for providing rigidity to the overall device and for supporting an parts of an illumination and projection system; and an

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illumination and projection system (see fig. 3) consisting of at least one lamp (28) or light- emitting unit, a plurality of reflecting mirrors (68, 64) at least one movable condensing lens (36) and an electrical transformer and housing door with a micro-switch (144) actuation arrangement which controls the power of the projector (Drawing Description: fig. 8).

34. It would have been obvious to one of ordinary skill in the art at the time of invention to use Banality's micro switch and transformer in Chao's projector in view of Reinhard to turn the device on or off as the top hinged lid is opened so that voltage can be utilized efficiently and apply Banality's movable condensing lens to improve the quality of the projected image.

35. Further, Gishi et al. (US 6,837,583) herein after referred to as "Gishi," discloses a projector and lamp body (see figure 3) having modular interlocking faces (see figure 3;12, 11). It would have been obvious to one of ordinary skill in the art at the time of invention to combine Gishi's teaching of modular interlocking surfaces to Chao's device in view of Reinhard and further in view of Badalich so that said six substantially identical faces are modular interlocking faces to reduce material cost.

36. Lastly, Burgess (4,184,755) herein after referred to as "Burgess," discloses wherein a folded and punched metal sheet (fig. 6) supports the bulb unit . At the time of invention it would have been obvious to one of ordinary skill in the art to combine the teachings of Burgess to Chao's device in view of Reinhard and further in view of Badalich and Gishi to reduce manufacturing cost .Therefore it would have been

motivated to apply Burgess's disclosure to Morinaga's device in view of Reinhard and further in view of Badalich and Gishi.

Allowable Subject Matter

37. Claims 7, 11, and 12 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

38. With respect to claims 7, 11 and 12, the patentable subject matter regards the formation of the housing such that side of the housing are luminous from the lighting within the housing and the particular movement control means for the lens holder control of the focusing lens in combination with this particular type housing.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JERRY BROOKS whose telephone number is (571)270-5711. The examiner can normally be reached on Monday-Thursday: 10 a.m.-5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Nguyen can be reached on (571)272-2424. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JERRY BROOKS/
Examiner, Art Unit 4126

/Tu T. Nguyen/
Supervisory Patent Examiner, Art
Unit 4126